

## REMARKS

The issue outstanding in the Office Action mailed December 22, 2004, are the arrangement of the specification, the Information Disclosure Statement, and rejections under 35 U.S.C §§112 and 103. Reconsideration of these issues, in view of the following discussion, is respectfully requested.

### Specification

The objection to the order of the specification is not fully understood. In any event, it is submitted that the arrangement of the specification discussed in the cited portions of the M.P.E.P. and 37 C.F.R. §1.77 are suggested, but not mandatory. It is not seen that reordering of the specification is needed for clarity. It is noted that a heading "Summary of the Invention" has been added.

### Information Disclosure Statement

The three references apparently separated from the prior Information Disclosure Statement are filed herewith, along with an additional form 1449 listing these three references. It is requested that the Examiner initial the 1449 and return the same.

### Rejections Under 35 U.S.C §112

Claims 1 - 10 have been rejected under 35 U.S.C §112, second paragraph. Reconsideration of this rejection is respectfully requested.

First, with respect to any perceived lack of clarity as to which reagent is in excess molar ratio, it is believed evident from the claims and specification that it does not matter which reagent is in excess. Specifically, *either* reagent can be in excess, and the other can be added. See, for example, the specification at page 2, lines 18 - 21.

With respect to the "place left free", it is as believed evident that this term refers to free space volume in the reactor. Minor grammatical changes have been made to the claim in order to provide antecedent basis for this term, and to provide antecedent basis for the "desired molar

ratio." With respect to that desired molar ratio, it is believed quite clear from the claim, and from the specification, for example at page 1, line 33 - page 2, line 9, and lines 22 - 28, that the desired molar ratio is that final ratio at which the reaction is allowed to proceed, i.e., the overall molar ratio of the reagents in the reaction. Thus, it is submitted that the claim is clear on its face.

With respect to issues concerning claims 7, 9 and 10, noted at page 3 of the Office Action, various minor grammatical and typographic changes have been made to the claims, in order to place them in a format more usual for U.S. practice. The scope of these claims has not been changed by these amendments, either literally or for purposes of the doctrine of equivalents. It is submitted that the issues raised at page 3 of the Office Action are now accordingly moot.

Accordingly, withdrawal of the entirety of the rejection under 35 U.S.C §112 is respectfully requested.

#### Rejections Under 35 U.S.C §103

Claims 1 - 10 have been rejected under 35 U.S.C §103 over Hurtel et al. '239 taken with EP 4641 ("Dankert"). Reconsideration of this rejection is respectfully requested. Hurtel discloses a process for the preparation of (meth)acrylic anhydride, in which process acetic anhydride is reacted with (meth)acrylic acid, in the presence of at least one polymerization inhibitor, in a reactor surmounted by distillation column. See column 1, lines 28 - 32. Patentees indicate that the initial molar ratio of (meth)acrylic acid to acetic anhydride is between 2.05 and 5, that acetic acid formed during the reaction is drawn off, and that at least one polymerization inhibitor is gradually introduced at the top of the distillation column during the reaction and during the distillation. Patentees finally indicate that the polymerization inhibitor is diluted in an organic solvent; preferably, in acetic acid during the reaction and in (meth)acrylic anhydride during the distillation. See column 1, lines 38 - 46. Leaving aside, for the moment, the fact that the disclosed reaction produces (meth)acrylic anhydride and not isobutyric anhydride, it is apparent that the disclosed reaction also differs from the present claims in at least one extremely important aspect. Specifically, patentees teach starting the reaction with excess (meth)acrylic acid, and adding, during the reaction, polymerization inhibitor diluted in acetic acid. It is assumed that the organic solvent being added with the polymerization inhibitor is being argued in

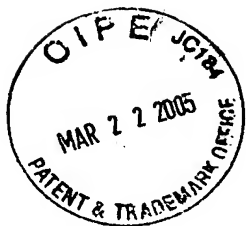
the Office Action to read on the claimed addition of the non-excess reactant, in the present claims. However, acetic acid is not a non-excess reactant in either Hurtel, or in the process presently claimed.

It is noted that Hurtel shifts, during the distillation, to dilution of the polymerization inhibitor in the product, (meth)acrylic anhydride. Again, addition of the product is *not* addition of the non-excess reactant as presently claimed. Moreover, it appears, at this point in the reference, the reaction is actually complete.

Accordingly, it is clear patentees fail to suggest at least this one important feature of the present claims; specifically, that the reaction is begun with an excess of one reactant, and the deficient reactant is supplied during the reaction as the acetic acid is distilled off. In the absolute absence of the teaching of such a concept, Hurtel fails to suggest these important process features. Indeed, Hurtel appears to teach away from such concept, since the addition of acetic acid as a diluent for the polymerization inhibitor is counter to distillation of acetic acid *during* the reaction, as presently claimed.

The Office Action combines Hurtel with Dankert in order to argue that it is obvious to rearrange the reaction so as to react acetic anhydride and isobutyric acid, to produce isobutyric anhydride, instead of reacting acetic anhydride with (meth)acrylic acid to produce (meth)acrylic anhydride, as taught in Hurtel. Regardless of whether such a rearrangement would be obvious (Applicants have no comment thereon at this point) it is clear that the significant deficiency of Hurtel, as noted above, would fail to suggest the presently claimed process *even if* such a rearrangement was made: the comparable process would still be adding acetic acid and/or product during the reaction, and presumably not simultaneously conducting distillation. Accordingly, it is evident that the references fail to suggest the present reaction, and withdrawal of the rejection under 35 U.S.C §103 is respectfully requested.

The claims of the application are submitted to be in condition for allowance. However, if the Examiner has any questions or comments, he is cordially invited to telephone the undersigned below.



The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "H.B. Shubin".

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